

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Indu Bhusan Chatterjee

Serial No.: Not Yet Assigned

For: Activated Charcoal Filter for Effectively Reducing P-Benzosemiquinone  
From the Mainstream Cigarette Smoke

Filed: Not Yet Assigned

Examiner: Not Yet Assigned

Art Unit: Not Yet Assigned

Attorney Docket No. 3030.004USU

Box Patent Application  
Assistant Commissioner of Patents  
Washington, D.C. 20231

February 13, 2002

Sir:

**PRELIMINARY AMENDMENT**

Applicants respectfully submit the following amendments and remarks.

**IN THE CLAIMS**

Please amend the claims as follows:

46. (Amended) The filter as claimed in claim 1, wherein the smoke from charcoal filter cigarettes exhaled by smokers containing markedly low level of p-BSQ and is potentially less hazardous to passive smokers.
47. (Amended) The filter of claim 1, wherein the mainstream smoke solution is incapable of producing significant oxidative damage to guinea pig lung microsomal proteins *in vitro*.
48. (Amended) The filter of claim 1 comprising activated charcoal wherein the mainstream cigarette smoke containing very low level of p-BSQ is incapable of

producing significant oxidative damage to the lung microsomal proteins of guinea pigs when the animals are exposed to smoke emitted from the said charcoal – filtered cigarettes in contrast to marked damage of the lung tissue when the animal are exposed to smoke from cigarettes without having the said charcoal filter.

**Please add the following new claims:**

49. The device as claimed in claim 40, wherein the smoke from charcoal filter cigarettes exhaled by smokers containing markedly low level of p-BSQ and is potentially less hazardous to passive smokers.
50. The device of claim 40, wherein the mainstream smoke solution is incapable of producing significant oxidative damage to guinea pig lung microsomal proteins *in vitro*.
51. The device of claim 40 comprising activated charcoal wherein the mainstream cigarette smoke containing very low level of p-BSQ is incapable of producing significant oxidative damage to the lung microsomal proteins of guinea pigs when the animals are exposed to smoke emitted from said charcoal–filtered cigarettes in contrast to marked damage of the lung tissue when the animal are exposed to smoke from cigarettes without having said charcoal filter.

**IN THE ABSTRACT**

Please amend the Abstract as follows:

A filter for tobacco smoke inhaling/generating/producing device, comprising stipulated amounts of specific grain sizes or combination of grain sizes of activated charcoal for effectively reducing from the mainstream smoke the level of p-benzosemiquinone (p-BSQ), a relatively stable highly reactive major harmful oxidant, without significantly

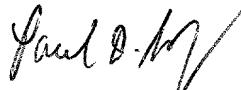
affecting the flavor and taste of the smoke while providing comfortable mouthful of smoke and nicotine delivery, so that the charcoal filter cigarettes becomes potentially less hazardous safer cigarettes and may be acceptable to the smokers with marked reduction in health risk; the charcoal filters also effectively reduce the level of nitric oxide and tar from the mainstream smoke.

#### **REMARKS**

Claims 46-48 have been clarified by amendment to remove the improper multiple dependency. New claims 49-51 have been added to correspond to claims 46-48, but are dependent upon claim 40. It is respectfully submitted that the amendments to the claims are neither narrowing nor made for substantial reasons related to patentability as defined by the Court of Appeals for the Federal Circuit (CAFC) in Festo Corporation v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd., 95-1066 (Fed. Cir. 2000). Therefore, the amendments to the claims do not create prosecution history estoppel and, as such, the doctrine of equivalents is available for all of the elements of the claim.

In view of the foregoing amendments and remarks applicant respectfully requests reconsideration and allowance of all the claims presently in the application.

Respectfully submitted,



Paul D. Greeley  
Ohlandt, Greeley, Ruggiero & Perle  
Attorneys for Applicant(s)  
Reg. No. 31,019  
(203)327-4500

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE CLAIMS**

Please amend the claims as follows:

46. (Amended) The filter as claimed in ~~claims 1 and 40~~ claim 1, wherein the smoke from charcoal filter cigarettes exhaled by smokers containing markedly low level of p-BSQ and is potentially less hazardous to passive smokers.
47. (Amended) The ~~cigarette~~ filter of ~~claims 1 to 40~~ claim 1, wherein the mainstream smoke solution is incapable of producing significant oxidative damage to guinea pig lung microsomal proteins *in vitro*.
48. (Amended) The filter of ~~claims 1 to 40~~ claim 1 comprising activated charcoal wherein the mainstream cigarette smoke containing very low level of p-BSQ is incapable of producing significant oxidative damage to the lung microsomal proteins of guinea pigs when the animals are exposed to smoke emitted from the said charcoal – filtered cigarettes in contrast to marked damage of the lung tissue when the animal are exposed to smoke from cigarettes without having the said charcoal filter.

**Please add the following new claims:**

49. The device as claimed in claim 40, wherein the smoke from charcoal filter cigarettes exhaled by smokers containing markedly low level of p-BSQ and is potentially less hazardous to passive smokers.
50. The device of claim 40, wherein the mainstream smoke solution is incapable of producing significant oxidative damage to guinea pig lung microsomal proteins *in vitro*.
51. The device of claim 40 comprising activated charcoal wherein the mainstream cigarette smoke containing very low level of p-BSQ is incapable of producing

significant oxidative damage to the lung microsomal proteins of guinea pigs when the animals are exposed to smoke emitted from said charcoal-filtered cigarettes in contrast to marked damage of the lung tissue when the animal are exposed to smoke from cigarettes without having said charcoal filter.

### **IN THE ABSTRACT**

Please amend the Abstract as follows:

A~~This invention relates to~~ a filter for tobacco smoke inhaling/generating/producing device, comprising stipulated amounts of specific grain sizes or combination of grain sizes of activated charcoal for effectively reducing from the mainstream smoke the level of p-benzosemiquinone (p-BSQ), a relatively stable highly reactive major harmful oxidant, without significantly affecting the flavor and taste of the smoke while providing comfortable mouthful of smoke and nicotine delivery, so that the ~~said~~ charcoal filter cigarettes becomes potentially less hazardous safer cigarettes and may be acceptable to the smokers with marked reduction in health risk; the ~~said~~ charcoal filters also effectively reduce the level of nitric oxide and tar from the mainstream smoke.

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